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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,080	07/16/2001	Yatin Acharya	95-508	5978

20736 7590 07/28/2005

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EXAMINER	
NGUYEN, THU HA T	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/905,080	ACHARYA, YATIN	
	Examiner	Art Unit	
	Thu Ha T. Nguyen	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2005*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09/24/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims **1-13** are presented for examination.

2. Claims 1, 2, and 12 are currently amended.

3. Claim 13 is newly added.

Response to Arguments

4. Applicant's arguments filed May 04, 2005 have been fully considered but they are not persuasive because of the following reasons:

5. Applicant argues that Pekkala does not teach or suggest outputting by the network interface in the network node a data flow interruption request, and reducing by the processor in the network node the prescribed data stream by reducing execution of the prescribed application resource that generates the prescribed data stream, wherein the reducing step includes halting execution of the prescribed application resource, based on a determined unavailability of the system memory resources. In response to applicant's argument, examiner asserts that Pekkala does teach the feature of outputting by the network interface in the network node a data flow interruption request as shown in paragraphs 0084, 0092-0094, 0112 [*after detecting that there is no buffers are available to receive the data packet, issuing and providing a notification/flow control packet (i.e., outputting a data flow interruption request)*]. And Pekkala also teaches reducing by the processor in the network node the prescribed data stream by reducing execution of the prescribed application resource that generates the prescribed data stream, wherein the reducing step includes halting execution of the prescribed application resource, based on a determined unavailability of the system memory

resources as shown in paragraphs 0076, 0084-0085, 0094, 0113-0114 [*After determining that the buffer is not available, issuing and transmitting zero credit flow control packets to shutdown /stop (i.e., halting) the link partner (i.e., application resource) then waits for the buffer to become available to receive the packet*].

6. Applicant argues that Pekkala does not teach or suggest the feature of detected depletion of network bandwidth is identified in dependent claim 2 as the depletion of flow control credits. In response to applicant's argument, examiner asserts that Pekkala does teach detected depletion of network bandwidth is identified as the depletion of flow control credits as shown in abstract, paragraphs 0016, 0056, 0063-0066, 0074, 0077 [*determining the utilization of full link bandwidth and the maximum-sized IB (Infiniband) data packet (i.e., flow control credits)*].

7. Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter broadly recited in independent claims 1 and 7. Claims 2-6, and 8-13 are also rejected at least by virtue of their dependency on independent claims and by other reasons set forth in this office action [see rejection below].

8. Applicants still have failed to identify specific claim limitations that would define a patentable distinction over cited prior arts. Accordingly, rejections for claims 1-13 are rejected below.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Pekkala et al.** (hereinafter Pekkala) U.S. Pub. No. **2002/0085493**.

11. As to claim 1, **Pekkala** teaches the invention as claimed, including a method in a network node, the method comprising:

detecting by a network interface (port 208, figure 2) in the network node a depletion of flow control resources representing a depletion of network bandwidth for a prescribed data stream (paragraphs 0049-0051, 0074-0077, 0092, 0106-0107);

outputting by the network interface a data flow interruption request based on the detected depletion of flow control resources (paragraphs 0084, 0092-0094, 0112); and

reducing, by a processor in the network node and based on the data flow interruption request, the prescribed data stream by reducing execution of a prescribed application resource configured for generating the prescribed data stream (paragraphs 0076, 0084-0085, 0094, 0113-0114).

12. As to claim 2, **Pekkala** teaches the invention as claimed, wherein the network interface is configured for outputting the prescribed data stream according to infiniBand protocol, the detecting step including detecting depletion of flow control

credits, as the flow control resources, for a prescribed virtual lane (abstract, paragraphs 0016, 0056, 0063-0066, 0074, 0077).

13. As to claim 3, **Pekkala** teaches the invention as claimed, wherein the outputting step includes outputting the data flow interruption request to a memory controller configured for controlling access to system memory resources, the memory controller rendering unavailable the system memory resources for the prescribed application resource in response to reception of the data flow interruption request (paragraphs 0085, 0094).

14. As to claim 4, **Pekkala** teaches the invention as claimed, wherein the reducing step includes halting execution of the prescribed application resource, based on a determined unavailability of the system memory resources (paragraphs 0076, 0084-0085, 0094, 0113-0114).

15. As to claim 5, **Pekkala** teaches the invention as claimed, further comprising outputting by the network interface a resume data flow request based on a detected replenishment of the flow control resources for the prescribed data stream (paragraphs 0114, 0117-0118).

16. As to claim 6, **Pekkala** teaches the invention as claimed, further comprising resuming execution of the prescribed application resource based on the resume data flow request (paragraphs 0114-0116).

17. As to claim 7, **Pekkala** teaches the invention as claimed, including a network node comprising:

a network interface configured for detecting a depletion of flow control resources representing a depletion of network bandwidth for a prescribed data stream, the network interface configured for outputting a data flow interruption request based on the detected depletion of flow control resources (paragraphs 0049-0051, 0074-0077, 0084, 0092-0094, 0106-0107, 0112); and

a processor configured for executing a prescribed application resource for generation of the prescribed data stream, the processor configured for reducing the prescribed data stream by reducing execution of the prescribed application resource, based on the data flow interruption request (paragraphs 0076, 0084-0085, 0094, 0113-0114).

18. As to claim 8, **Pekkala** teaches the invention as claimed, further comprising a memory controller configured for controlling access to system memory resources, the memory controller configured for rendering unavailable the system memory resources for the prescribed application resource in response to reception of the data flow interruption request (paragraphs 0085, 0094).

19. As to claim 9, **Pekkala** teaches the invention as claimed, wherein the processor is configured for reducing the execution of the prescribed application resource based on detecting the unavailability of the system memory resources (paragraphs 0076, 0084-0085, 0094, 0113-0114).

20. As to claim 10, **Pekkala** teaches the invention as claimed, wherein the network interface is configured for outputting a resume data flow request based on a detected replenishment of the flow control resources for the prescribed data stream (paragraphs 0114, 0117-0118).

21. As to claim 11, **Pekkala** teaches the invention as claimed, wherein the processor is configured for resuming execution of the prescribed application resource based on the resume data flow request (paragraphs 0114-0116).

22. As to claim 12, **Pekkala** teaches the invention as claimed, wherein the network interface is configured for outputting the prescribed data stream according to infiniband protocol, the network interface configured for detecting depletion of flow control credits, as the flow control resources, for a prescribed virtual lane (abstract, paragraphs 0056, 0077).

23. As to claim 13, **Pekkala** teaches the invention as claimed in claim 1, wherein the outputting step includes outputting the data flow interruption request to a memory controller in the network node and that is configured for controlling access to system memory resources in the network node, the memory controller rendering unavailable the system memory resources for the prescribed application resource in response to reception of the data flow interruption request (paragraphs 0085, 0094).

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571) 272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thu Ha Nguyen

July 22, 2005

SALEH NAJJAR
PRIMARY EXAMINER